# **SIEMENS**

Data sheet 3RW5556-2HA16



SIRIUS soft starter 200-690 V 1100 A, 110-250 V AC Spring-type terminals

Figure similar

product brand name	SIRIUS
product category	Hybrid switching devices
product designation	Soft starter
product type designation	3RW55
manufacturer's article number	
<ul> <li>of high feature HMI module usable</li> </ul>	3RW5980-0HF00
<ul> <li>of communication module PROFINET standard usable</li> </ul>	3RW5980-0CS00
• of communication module PROFINET high-feature usable	3RW5950-0CH00
<ul> <li>of communication module PROFIBUS usable</li> </ul>	3RW5980-0CP00
<ul> <li>of communication module Modbus TCP usable</li> </ul>	3RW5980-0CT00
<ul> <li>of communication module Modbus RTU usable</li> </ul>	3RW5980-0CR00
<ul> <li>of communication module Ethernet/IP</li> </ul>	3RW5980-0CE00
<ul> <li>of circuit breaker usable at 400 V</li> </ul>	3VA2716-7AB05-0AA0: Type of coordination 1, Iq = 65 kA, CLASS 10
<ul> <li>of circuit breaker usable at 500 V</li> </ul>	3VA2716-7AB05-0AA0: Type of coordination 1, Iq = 65 kA, CLASS 10
<ul> <li>of the gG fuse usable up to 690 V</li> </ul>	3x3NA3365-6; Type of coordination 1, Iq = 65 kA
<ul> <li>of full range R fuse link for semiconductor protection usable up to 690 V</li> </ul>	3NB3354-1KK26: Type of coordination 2. Iq = 65 kA
<ul> <li>of back-up R fuse link for semiconductor protection usable up to 690 V</li> </ul>	3x3NE3340-8; Type of coordination 2, Iq = 65 kA
Seneral technical data	
starting voltage [%]	20 100 %
stopping voltage [%]	50 %; non-adjustable
start-up ramp time of soft starter	0 360 s
ramp-down time of soft starter	0 360 s
start torque [%]	10 100 %
stopping torque [%]	10 100 %
torque limitation [%]	20 200 %
current limiting value [%] adjustable	125 800 %
breakaway voltage [%] adjustable	40 100 %
breakaway time adjustable	0 2 s
number of parameter sets	3
accuracy class	5 (based on IEC 61557-12)
certificate of suitability	
CE marking	Yes
UL approval	Yes
CSA approval	Yes
product component	
HMI-High Feature	Yes
• is supported HMI-High Feature	Yes
product feature integrated bypass contact system	Yes

number of controlled phases	3
trip class	CLASS 10A / 10E (default) / 20E / 30E; acc. to IEC 60947-4-2
current unbalance limiting value [%]	10 60 %
ground-fault monitoring limiting value [%]	10 95 %
buffering time in the event of power failure	10 00 //
• for main current circuit	100 ms
• for control circuit	100 ms
	0 255 s
idle time adjustable	690 V
insulation voltage rated value	
degree of pollution	3, acc. to IEC 60947-4-2
impulse voltage rated value	8 kV
blocking voltage of the thyristor maximum	1 800 V
service factor	1.15
surge voltage resistance rated value	8 kV
maximum permissible voltage for protective separation	
between main and auxiliary circuit	690 V; does not apply for thermistor connection
shock resistance	15 g / 11 ms, from 6 g / 11 ms with potential contact lifting
vibration resistance	15 mm up to 6 Hz; 2 g up to 500 Hz
recovery time after overload trip adjustable	60 1 800 s
utilization category according to IEC 60947-4-2	AC 53a
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	02/11/2019
product function	
<ul><li>ramp-up (soft starting)</li></ul>	Yes
<ul><li>ramp-down (soft stop)</li></ul>	Yes
<ul> <li>breakaway pulse</li> </ul>	Yes
adjustable current limitation	Yes
<ul> <li>creep speed in both directions of rotation</li> </ul>	Yes
pump ramp down	Yes
DC braking	Yes
<ul> <li>motor heating</li> </ul>	Yes
<ul> <li>slave pointer function</li> </ul>	Yes
trace function	Yes
<ul> <li>intrinsic device protection</li> </ul>	Yes
motor overload protection	Yes; Full motor protection (thermistor motor protection and electronic motor overload protection)
<ul> <li>evaluation of thermistor motor protection</li> </ul>	Yes; Type A PTC or Klixon / Thermoclick
• inside-delta circuit	Yes; Only up to 600 V operating voltage
auto-RESET	Yes
manual RESET	Yes
• remote reset	Yes
• communication function	Yes
operating measured value display	Yes
• event list	Yes
• error logbook	Yes
via software parameterizable	Yes
via software configurable	Yes
screw terminal	No
spring-loaded terminal	Yes
PROFlenergy	Yes; in connection with the PROFINET Standard and PROFINET High-Feature communication modules
firmware update	Yes
removable terminal for control circuit	Yes
voltage ramp	Yes
torque control	Yes
combined braking	Yes
analog output	Yes; 4 20 mA (default) / 0 10 V
programmable control inputs/outputs	Yes
	Yes
condition monitoring     automatic parameterization	Yes
automatic parameterisation     application wizerds	
application wizards	Yes

	v.
alternative run-down	Yes
emergency operation mode	Yes
reversing operation	Yes
soft starting at heavy starting conditions	Yes
Power Electronics	
operational current	
at 40 °C rated value	1 100 A
at 40 °C rated value minimum	220 A
• at 50 °C rated value	979 A
at 60 °C rated value	890 A
operational current at inside-delta circuit	
• at 40 °C rated value	1 905 A
• at 50 °C rated value	1 695 A
at 60 °C rated value	1 541 A
operating voltage	
rated value	200 690 V
at inside-delta circuit rated value	200 600 V
relative negative tolerance of the operating voltage	-15 %
relative positive tolerance of the operating voltage	10 %
relative negative tolerance of the operating voltage at inside-delta circuit	-15 % 
relative positive tolerance of the operating voltage at inside-delta circuit	10 %
operating power for 3-phase motors	
• at 230 V at 40 °C rated value	315 kW
• at 230 V at inside-delta circuit at 40 °C rated value	560 kW
• at 400 V at 40 °C rated value	560 kW
<ul> <li>at 400 V at inside-delta circuit at 40 °C rated value</li> </ul>	1 000 kW
• at 500 V at 40 °C rated value	710 kW
• at 500 V at inside-delta circuit at 40 °C rated value	1 200 kW
• at 690 V at 40 °C rated value	1 000 kW
Operating frequency 1 rated value	50 Hz
Operating frequency 2 rated value	60 Hz
relative negative tolerance of the operating frequency	-10 %
relative positive tolerance of the operating frequency	10 %
minimum load [%]	10 %; Relative to set le
power loss [W] for rated value of the current at AC	
• at 40 °C after startup	330 W
• at 50 °C after startup	270 W
at 60 °C after startup	223 W
power loss [W] at AC at current limitation 350 $\%$	
• at 40 °C during startup	18 502 W
• at 50 °C during startup	15 568 W
at 60 °C during startup	13 552 W
type of the motor protection	Electronic, tripping in the event of thermal overload of the motor
Control circuit/ Control	
type of voltage of the control supply voltage	AC
control supply voltage at AC	
● at 50 Hz	110 250 V
● at 60 Hz	110 250 V
relative negative tolerance of the control supply voltage at AC at 50 Hz	-15 %
relative positive tolerance of the control supply voltage at AC at 50 Hz	10 %
relative negative tolerance of the control supply voltage at AC at 60 Hz	-15 %
relative positive tolerance of the control supply voltage at AC at 60 Hz	10 %
control supply voltage frequency	50 60 Hz
relative negative tolerance of the control supply voltage	-10 %
frequency	

holding current in bypass operation rated value  inrush current by closing the bypass contacts maximum  inrush current peak at application of control supply voltage maximum  duration of inrush current peak at application of control supply voltage  design of the overvoltage protection  design of short-circuit protection for control circuit  4 A gG fuse (Icu=1 kA), 6 A quick-acting fuse (Icu=1 kA), C1 miniature circuit breaker (Icu= 600 A), C6 miniature circuit breaker (Icu= 300 A); Is not part of scope of supply	control cumply current in standby made and a set of column	100 mA
Incus   Current by closing the bypass contacts maximum   A   A   A   A   A   A   A   A   A	control supply current in standby mode rated value	100 mA
Incash numer type as at application of control supply working missimum missimum missimum for incash current peak at application of control supply cottage   1,7 ms		
monitorinal current peak at application of control supply voltage         1,7 ms           design of the overvoltage protection         Varistor           design of short-circuit protection for control circuit breaker (circuit protection for control circuit breaker)           number of digital inputs         4           number of digital outputs         4           number of digital outputs on parameterscable         3           number of analog outputs         1           at Child a 250 V rated value         3 A           at Child a 250 V rated value         1 A           at Child a 250 V rated value         1 A           at Child a 250 V rated value         1 A           setanting method         screw fluing           festenting method         screw fluing           evidenting papers with side-by-side mounting         41 mm           evidenting without packaging         0 mm           e towards         0 mm           a tirtle side         9 mm           obunkards         0 ft maintine circuit breaker (screw fluing) </td <td></td> <td></td>		
violage         Variation           design of short-circuit protection for control circuit design of short-circuit protection for control circuit breaker ((au= 500 A), CB ministure circuit breaker ((au= 300 A); Is not part of breaker of digital inputs         4           • number of digital inputs         4           • number of digital outputs         4           • number of digital outputs parameterizable         4           • number of digital outputs on parameterizable         3           • number of digital outputs parameterizable         1           • number of digital outputs on parameterizable         1           • number of digital outputs on parameterizable         1           • at AC-15 at 250 V rated value         3 A           • at DC-15 at 220 V rated value         1 A           • at AC-15 at 220 V rated value         1 A           • at DC-15 at 24 V rated value         1 A           • at DC-15 at 24 V rated value         1 A           • at DC-15 at 24 V rated value         2 A           • fastening method         vertcal (can be trated **-90* and titled forward or backward **-22.5*)           • fastening method         241 mm           • to provide the parameterizable of the parameterizable or the parameterizable of the parameterizable or the parameteriza	maximum	
A A G B use (local I AX). E A quick acting tiese (local I AX). C a ministure circuit breaker (local 900 A). Ca ministure circuit breaker (local 900 A). Ca ministure circuit breaker (local 900 A). Is not part of soppe of supply		1.7 ms
protest Outputs	design of the overvoltage protection	Varistor
number of digital inputs         4           e number of digital outputs         4           e number of digital outputs parameterizable         3           e number of digital outputs parameterizable         3           e number of digital outputs not parameterizable         1           e number of digital outputs parameterizable         1           i mumber of analog outputs         3 nomally-open contacts (NO) / 1 changeover contact (CO)           number of analog outputs         3 A           e at DC-13 at 24V rated value         1 A           e at DC-13 at 24V rated value         1 A           e at DC-13 at 24V rated value         1 A           e at DC-13 at 24V rated value         1 A           mounting position         Vertical (can be rotated +/- 90° and titled forward or backward +/- 22.5°)           fastering method         478 mm           height         478 mm           width         478 mm           depth         9 man           e forwards         1 0 mm           e forwards         0 0 mm           e forwards         1 0 mm           e forwards         5 mm           e the side         5 mm           e forwards         1 0 mm           e forwards         1 0 mm	design of short-circuit protection for control circuit	breaker (Icu= 600 A), C6 miniature circuit breaker (Icu= 300 A); Is not part of
• number of digital outputs • number of digital outputs parameterizable • number of digital outputs parameterizable • number of digital outputs not parameterizable • at Oct 3 digital output version • number of analog outputs • at AC-15 at 250 V rated value • at AC-15 at 250 V rated value • at AC-15 at 250 V rated value • at AC-15 at 24 V rated value • 1A  ***statilation/mounting/dimonstons  **mounting position **mounting position **destinate of the parameterizable **destinate outputs **destinate o	Inputs/ Outputs	
* number of digital outputs * number of digital outputs parameterizable * number of digital outputs parameterizable * number of digital outputs parameterizable * number of digital outputs of parameterizable * number of digital outputs of parameterizable * number of digital outputs * of digital output version * of digital outputs * of version * of the version * of	number of digital inputs	4
• number of digital outputs parameterizable • guitar output version number of digital outputs not parameterizable • guitar output version number of digital outputs  • all AC-15 all 250 V rated value • all AC-15	parameterizable	4
• number of digital outputs parameterizable • guitar output version number of digital outputs not parameterizable • guitar output version number of digital outputs  • all AC-15 all 250 V rated value • all AC-15		
	number of digital outputs	4
digital output version         3 normally-open contacts (NO) / 1 changeover contact (CO)           number of analog outputs         1           e at AC-15 at 280 V rated value         3 A           e at DC-13 at 24 V rated value         1 A           e at DC-13 at 24 V rated value         1 A           installation/mounting/idimensions         Vertical (can be rotated +/- 90° and titled forward or backward +/- 22.5°)           fastening method         server fixing           height         764 mm           width         478 mm           depth         241 mm           required spacing with side-by-side mounting         10 mm           e forwards         0 mm           e backwards         0 mm           o downwards         5 mm           e at the side         5 mm           e of main current circuit         5 mm           e for main current circuit         busbar connection           e for main current circuit         55 mm           with conductor cross-section = 0.5 mm² maximum         55 m           e vivit conductor cross-section = 0.5 mm² maximum         50 m           e for DIN cable lug for main contacts finely stranded         2x (50 240 mm²)           type of connectable conductor cross-section         2.5 mm² maximum         2x (02 ±	<ul> <li>number of digital outputs parameterizable</li> </ul>	3
number of analog outputs         1           switching capacity current of the relay outputs         3           • at AC-15 at 280 Y rated value         1A           • at DC-13 at 24 Y rated value         1A           mounting position         Vertical (can be rotated +/- 90° and titled forward or backward +/- 22.5°)           fastening method         478 mm           depth         478 mm           depth         478 mm           depth         9 mm           equired spacing with side-by-side mounting         10 mm           equired spacing with side-by-side mounting         100 mm           e backwards         100 mm           e backwards         100 mm           e downwards         5 mm           e downwards         5 mm           e the side         5 mm           velight without packaging         6 lt kg           connections/ Terminals         5 mm           type of electrical connection         5 mm           e for control circuit         5 busbar connection           e for control circuit         5 busbar connection           e for control circuit         5 mm           e for control circuit         5 mm           e for control circuit         5 mm         5 mm	<ul> <li>number of digital outputs not parameterizable</li> </ul>	1
number of analog outputs         1           switching capacity current of the relay outputs         3           • at AC-15 at 280 Y rated value         1A           • at DC-13 at 24 Y rated value         1A           mounting position         Vertical (can be rotated +/- 90° and titled forward or backward +/- 22.5°)           fastening method         478 mm           depth         478 mm           depth         478 mm           depth         9 mm           equired spacing with side-by-side mounting         10 mm           equired spacing with side-by-side mounting         100 mm           e backwards         100 mm           e backwards         100 mm           e downwards         5 mm           e downwards         5 mm           e the side         5 mm           velight without packaging         6 lt kg           connections/ Terminals         5 mm           type of electrical connection         5 mm           e for control circuit         5 busbar connection           e for control circuit         5 busbar connection           e for control circuit         5 mm           e for control circuit         5 mm           e for control circuit         5 mm         5 mm		3 normally-open contacts (NO) / 1 changeover contact (CO)
switching capacity current of the relay outputs		
• at AC-15 at 250 V rated value • at DC-13 at 24 V rated value • at DC-13 at 24 V rated value  ***stallation** mounting position fastening method height vieth depth required spacing with side-by-side mounting • forwards • backwards • backwards • convards • downwards • at the side  ***of main current circuit • for control circuit soil • off control circuit soil • with conductor cross-section = 0.5 mm² maximum • with conductor cross-section = 1.5 mm² maximum • with conductor cross-section = 1.5 mm² maximum • for control circuit finely stranded • for AWG cables for control circuit finely stranded with core end processing • for MAWG cables for control circuit finely stranded with core end processing • for Maw Cables for control circuit fighted in the side soil • for main cortacts with screw-type terminals • for main cortacts with screw-type terminals • for main contacts with screw-type terminals • for main contacts with screw-type terminals • for main contacts with screw-type terminals • for maunicatinary control circuit soil • for for auxiliary and control contacts with screw-type terminals • for maunicatinary control circuit soil • for main contacts with screw-type terminals • for maxiliary and control contacts with screw-type terminals • for maxiliary and control contacts with screw-type terminals • for maxiliary and control contacts with screw-type terminals • for maxiliary and control contacts with screw-type terminals • for maxiliary and control contacts with screw-type terminals • for maxiliary and control contacts with screw-type terminals • for maxiliary and control contacts with screw-type terminals • for maxiliary and control contacts with screw-type terminals • for maxiliary and control contacts with screw-type terminals • for maxiliary and control contacts with screw-type terminals • for maxiliary and control contacts with screw-type terminals • for maxiliary and control contacts with screw-type terminals • for maxiliary and control contacts with screw-type terminals • for maxiliary and control contac		
s at DC-13 at 24 V rated value         1A           Installation mounting of dimensions         Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)           fastoning method         screw fixing           height         764 mm           width         478 mm           depth         241 mm           required spacing with side-by-side mounting         10 mm           • backwards         0 mm           • backwards         0 mm           • downwards         5 mm           • at the side         5 mm           • of main current circuit         5 mm           • for onnections/Torninals         5 mm           type of electrical connection         5 mm           • for control circuit         busbar connection           wird for connection bar maximum         55 mm           wird nonductor cross-section = 0.5 mm² maximum         50 m           • with conductor cross-section = 0.5 mm² maximum         50 m           • with conductor cross-section = 2.5 mm² maximum         250 m           type of connectable conductor cross-sections         2x (50 240 mm²)           • for DIN cable lug for main contacts stranded         2x (50 240 mm²)           • for DIN cable lug for main contacts stranded         2x (2.5 1.5 mm²)      <	J . J	3 A
mounting position Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°) fastening method screw fixing 764 mm width 478 mm depth 241 mm required spacing with side-by-side mounting or backwards 47.60 mm		
mounting position         Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)           fastening method         screw fixing           height         764 mm           width         478 mm           depth         241 mm           required spacing with side-by-side mounting         10 mm           • backwards         0 mm           • backwards         0 mm           • downwards         75 mm           • downwards         5 mm           • for control circuit         busbar connection           • for main current circuit         busbar connection           • for ontrol circuit         spring-loaded terminals           with onductor cross-section = 0.5 mm² maximum         55 mm           • with conductor cross-section = 1.5 mm² maximum         50 m           • with conductor cross-section = 2.5 mm² maximum         25 m           • for DIN cable lug for main contacts finely stranded         2x (2x - 2x - 2x 0 mm²)	11 1 11 11 111	
fastening method         screw fixing           height         764 mm           width         478 mm           depth         241 mm           required spacing with side-by-side mounting         10 mm           • forwards         10 mm           • backwards         0 mm           • downwards         5 mm           • at the side         5 mm           veight without packaging         61 kg           connections/ Terminals         5 mm           veight without packaging         5 mm           of or main current circuit         busbar connection           • for main current circuit         busbar connection           • for for control circuit         55 mm           with conductor cross-section = 0.5 mm² maximum         50 m           • with conductor cross-section = 0.5 mm² maximum         250 m           with conductor cross-section = 0.5 mm² maximum         250 m           type of connectable conductor cross-sections         40 m²           • for DIN cable lug for main contacts finely stranded         2x (70 240 mm²)           • for control circuit solid         2x (24 6)           • for control circuit solid         2x (24 16)           • for control circuit solid         2x (24 16)		Vertical (can be rotated +/- 90° and tilted forward or backward +/- 22.5°)
height         764 mm           width         478 mm           depth         241 mm           required spacing with side-by-side mounting         10 mm           orowards         100 mm           e backwards         0 mm           outpwards         100 mm           e at the side         5 mm           weight without packaging         61 kg           connections/ Terminals         ************************************	- · · ·	
width         478 mm           depth         241 mm           required spacing with side-by-side mounting         7           • forwards         10 mm           • backwards         0 mm           • upwards         75 mm           • at the side         5 mm           weight without packaging         6 it kg           Connections/ Terminals           Type of electrical connection           • for main current circuit         busbar connection           • for control circuit         busbar connection           • with conductor cross-section = 0.5 mm² maximum         55 mm           with conductor cross-section = 0.5 mm² maximum         55 mm           • with conductor cross-section = 1.5 mm² maximum         50 m           • with conductor cross-section = 1.5 mm² maximum         250 m           • with conductor cross-section = 1.5 mm² maximum         250 m           • for DIN cable lug for main contacts stranded         2x (50 240 mm²)           • for DIN cable lug for main contacts stranded         2x (50 240 mm²)           • for control circuit solid         2x (0.25 1.5 mm²)           • for control circuit solid         2x (24 16)           • for AWG cables for control circuit finely stranded with core end processing         2x (24 16)	<u> </u>	
dopth         241 mm           required spacing with side-by-side mounting         10 mm           • forwards         10 mm           • backwards         0 mm           • downwards         75 mm           • at the side         5m           weight without packaging         61 kg           Connections/ Terminals           type of electrical connection           • for main current circuit         busbar connection           • for control circuit         spring-loaded terminals           wird of connection bar maximum         55 mm           wire length for thermistor connection         55 mm           with conductor cross-section = 1.5 mm² maximum         50 m           with conductor cross-section = 2.5 mm² maximum         250 m           type of connectable conductor cross-sections         2x (50 240 mm²)           • for DIN cable lug for main contacts stranded         2x (50 240 mm²)           • for control circuit finely stranded with core end processing         2x (0.25 1.5 mm²)           • for control circuit solid         2x (0.25 1.5 mm²)           • for AWG cables for control circuit solid         2x (24 16)           • for AWG cables for control circuit solid with core end processing processing         2x (24 16)           • for pa	•	
required spacing with side-by-side mounting  • forwards • backwards • upwards • downwards • for main current circuit • for control circuit • for control circuit • for control circuit • for control circuit • with conductor cross-section = 0.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • for for INn cable lug for main contacts stranded • for polin cable lug for main contacts stranded • for control circuit finely stranded with core end processing • for control circuit finely stranded with core end processing • for AWG cables for control circuit finely stranded with core end processing • for AWG cables for control circuit finely stranded with core end processing • for AWG cables for control circuit finely stranded with core end processing • for AWG cables for control circuit finely stranded with core end processing • for AWG cables for control circuit finely stranded with core end processing • for AWG cables for control circuit finely stranded with core end processing • for AWG cables for control circuit finely stranded with core end processing • for for AWG cables for control circuit finely stranded with core end processing • for for AWG cables for control circuit finely stranded with core end processing • for for AWG cables for control circuit finely stranded with core end processing • for aWG cables for control circuit finely stranded with core end processing • for aWG cables for control circuit finely stranded with core end processing • for aWG cables for control circuit finely stranded with core end processing • for aWG cables for control circuit finel		
	•	Z41 mm
backwards     upwards     downwards     downwards     at the side     selection of the side  weight without packaging  Connections/ Terminals  type of electrical connection     for main current circuit     for control circuit solid     for DIN cable lug for main contacts franded     for connectioable conductor cross-sections     for control circuit tinely stranded with core end processing     for AWG cables for control circuit tinely stranded with core end processing  wire length     for May Cables for control circuit tinely stranded with core end processing  wire length     for IN Cable lug for main contacts finely stranded with core end processing     for control circuit finely stranded with core end processing     set the digital inputs at DC maximum     at the digital inputs at DC maximum     for main contacts with screw-type terminals     for auxiliany and control contacts with screw-type terminals     for auxiliany a		
• upwards     • downwards     • at the side     • at the side     weight without packaging  Connections/ Torminals  type of electrical connection     • for main current circuit     • for control circuit     • for control cross-section = 0.5 mm² maximum     • with conductor cross-section = 1.5 mm² maximum     • with conductor cross-section = 1.5 mm² maximum     • with conductor cross-section = 2.5 mm² maximum     • with conductor cross-sections     • for DIN cable lug for main contacts stranded     • for DIN cable lug for main contacts franded     • for control circuit solid     • for control circuit finely stranded with core end processing     • for AWG cables for control circuit solid     • for AWG cables for control circuit finely stranded with core end processing  wire length     • between soft starter and motor maximum     • at the digital inputs at DC maximum  tightening torque     • for maximum contacts with screw-type terminals     • for auxiliany and control contacts with screw-type terminals     • for auxiliany and control contacts with screw-type terminals     • for auxiliany and control contacts with screw-type terminals     • for auxiliany and control contacts with screw-type     • for wight and control contacts with screw-type     • for auxiliany and control contacts with screw-type     • for wight and control contacts with screw-type     • for wight and control contacts with screw-type     • for wight and control contact		
e downwards e at the side for main current circuit e for control circuit solid e for DIN cable lug for main contacts finely stranded e for Control circuit solid e for AWG cables for control circuit finely stranded with core end processing wire length e for AWG cables for control circuit finely stranded with core end processing wire length e for will must as DC maximum  800 m e tightening torque e for main contacts with screw-type terminals  75 mm  61 kg  61 kg  62 kg  61 kg  62 kg  63 kg  64 kg  65 kg	• backwards	
e at the side 5 mm  weight without packaging 61 kg  Connections/ Terminals  type of electrical connection  • for main current circuit 5 busbar connection  • for control circuit 55 mm  wire length for thermistor connection  • with conductor cross-section = 0.5 mm² maximum 55 m  • with conductor cross-section = 1.5 mm² maximum 250 m  • with conductor cross-section = 1.5 mm² maximum 250 m  • with conductor cross-section = 2.5 mm² maximum 250 m  • with conductor cross-section = 2.5 mm² maximum 250 m  • with conductor cross-sections = 2.5 mm² maximum 250 m  • for DIN cable lug for main contacts stranded 2x (50 240 mm²)  • for DIN cable lug for main contacts finely stranded 2x (70 240 mm²)  • for control circuit finely stranded with core end processing 6 for AWG cables for control circuit solid 2x (0.25 1.5 mm²)  • for AWG cables for control circuit finely stranded with core end processing 6 for AWG cables for control circuit finely stranded with core end processing 9 to AWG cables for control circuit finely stranded with core end processing 9 to AWG cables for control circuit finely stranded with 2x (24 16)  • for AWG cables for control circuit finely stranded with core end processing 9 to AWG cables for control circuit finely stranded with 2x (24 16)  • for awdia inputs at DC maximum 800 m  • at the digital inputs at DC maximum 1 000 m  tightening torque  • for maximon contacts with screw-type terminals  • for awxiliary and control contacts with screw-type terminals	• upwards	100 mm
weight without packaging     61 kg       Connections/ Terminals       type of electrical connection     busbar connection       • for main current circuit     busbar connection       • for control circuit     spring-loaded terminals       width of connection bar maximum     55 mm       wire length for thermistor connection     • with conductor cross-section = 0.5 mm² maximum     50 m       • with conductor cross-section = 1.5 mm² maximum     150 m       • with conductor cross-section = 2.5 mm² maximum     250 m       • with conductor cross-section = 2.5 mm² maximum     250 m       • for DIN cable lug for main contacts stranded     2x (50 240 mm²)       • for DIN cable lug for main contacts stranded     2x (70 240 mm²)       • for DIN cable lug for main contacts finely stranded     2x (70 240 mm²)       • type of connectable conductor cross-sections     2x (0.25 1.5 mm²)       • for control circuit finely stranded with core end processing     2x (0.25 1.5 mm²)       • for AWG cables for control circuit finely stranded with core end processing     2x (24 16)       wire length     between soft starter and motor maximum     800 m       • at the digital inputs at DC maximum     1 000 m       tightening torque     for auxillary and control contacts with screw-type terminals     20 35 N·m       • for auxillary and control contacts with screw-type     0.8	<ul><li>downwards</li></ul>	75 mm
type of electrical connection  • for main current circuit • for control circuit • for control circuit  width of connection bar maximum  wire length for thermistor connection • with conductor cross-section = 0.5 mm² maximum • with conductor cross-section = 1.5 mm² maximum • with conductor cross-section = 1.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • for DIN cable lug for main contacts stranded • for DIN cable lug for main contacts finely stranded • for control circuit solid • for control circuit solid • for control circuit finely stranded with core end processing • for AWG cables for control circuit finely stranded with core end processing  wire length • between soft starter and motor maximum • at the digital inputs at DC maximum  • for maxin contacts with screw-type terminals • for maxiliary and control contacts with screw-type terminals • for maxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals	at the side	5 mm
type of electrical connection  • for main current circuit • for control circuit  • for control circuit  width of connection bar maximum  * with conductor cross-section = 0.5 mm² maximum  • with conductor cross-section = 1.5 mm² maximum  • with conductor cross-section = 2.5 mm² maximum  • with conductor cross-section = 2.5 mm² maximum  • with conductor cross-sections  • for DIN cable lug for main contacts stranded • for DIN cable lug for main contacts stranded • for control circuit solid • for control circuit finely stranded with core end processing • for AWG cables for control circuit finely stranded with core end processing • for AWG cables for control circuit finely stranded with core end processing  • for AWG cables for control circuit finely stranded with core end processing • for at the digital inputs at DC maximum  • at the digital inputs at DC maximum  • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals  • for auxiliary and control contacts with screw-type terminals		61 kg
• for main current circuit • for control circuit  width of connection bar maximum  wire length for thermistor connection • with conductor cross-section = 0.5 mm² maximum • with conductor cross-section = 1.5 mm² maximum • with conductor cross-section = 1.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • with conductor cross-section = 2.5 mm² maximum • with conductor cross-sections • for DIN cable lug for main contacts stranded • for DIN cable lug for main contacts finely stranded • for connectable conductor cross-sections • for control circuit solid • for control circuit finely stranded with core end processing • for control circuit finely stranded with core end processing • for AWG cables for control circuit finely stranded with core end processing  wire length • between soft starter and motor maximum • at the digital inputs at DC maximum  1 000 m  tightening torque • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals	Connections/ Terminals	
• for control circuit  width of connection bar maximum  wire length for thermistor connection     • with conductor cross-section = 0.5 mm² maximum     • with conductor cross-section = 1.5 mm² maximum     • with conductor cross-section = 2.5 mm² maximum     • with conductor cross-section = 2.5 mm² maximum     • with conductor cross-section = 2.5 mm² maximum     • for DIN cable lug for main contacts stranded     • for DIN cable lug for main contacts finely stranded     • for control circuit solid     • for control circuit finely stranded with core end processing     • for AWG cables for control circuit finely stranded with core end processing     • for AWG cables for control circuit finely stranded with core end processing  wire length     • between soft starter and motor maximum     • between soft starter and motor maximum     • for main contacts with screw-type terminals     • for auxiliary and control contacts with screw-type terminals	type of electrical connection	
width of connection bar maximum     55 mm       wire length for thermistor connection     • with conductor cross-section = 0.5 mm² maximum     50 m       • with conductor cross-section = 1.5 mm² maximum     150 m       • with conductor cross-section = 2.5 mm² maximum     250 m       type of connectable conductor cross-sections     • for DIN cable lug for main contacts stranded     2x (50 240 mm²)       • for DIN cable lug for main contacts finely stranded     2x (70 240 mm²)       • for control circuit solid     2x (0.25 1.5 mm²)       • for control circuit finely stranded with core end processing     2x (0.25 1.5 mm²)       • for AWG cables for control circuit solid     2x (24 16)       • for AWG cables for control circuit finely stranded with core end processing     2x (24 16)       wire length     800 m       • between soft starter and motor maximum     800 m       • at the digital inputs at DC maximum     1000 m       tightening torque     6 or main contacts with screw-type terminals     20 35 N·m       • for auxillary and control contacts with screw-type terminals     20 35 N·m       • for auxillary and control contacts with screw-type terminals     20 35 N·m       • for auxillary and control contacts with screw-type terminals     20 35 N·m       • for auxillary and control contacts with screw-type terminals     20 35 N·m       • for auxillary and control contacts with scr	<ul> <li>for main current circuit</li> </ul>	busbar connection
wire length for thermistor connection  • with conductor cross-section = 0.5 mm² maximum  • with conductor cross-section = 1.5 mm² maximum  • with conductor cross-section = 2.5 mm² maximum  • with conductor cross-section = 2.5 mm² maximum  250 m  type of connectable conductor cross-sections  • for DIN cable lug for main contacts stranded • for DIN cable lug for main contacts finely stranded  2x (50 240 mm²)  type of connectable conductor cross-sections  • for control circuit solid • for control circuit finely stranded with core end processing • for control circuit finely stranded with core end processing • for AWG cables for control circuit solid • for AWG cables for control circuit finely stranded with core end processing  wire length • between soft starter and motor maximum • at the digital inputs at DC maximum  1 000 m  tightening torque • for main contacts with screw-type terminals • for auxilliary and control contacts with screw-type terminals	• for control circuit	spring-loaded terminals
<ul> <li>with conductor cross-section = 0.5 mm² maximum</li> <li>with conductor cross-section = 1.5 mm² maximum</li> <li>with conductor cross-section = 2.5 mm² maximum</li> <li>type of connectable conductor cross-sections</li> <li>for DIN cable lug for main contacts stranded</li> <li>for DIN cable lug for main contacts finely stranded</li> <li>2x (50 240 mm²)</li> <li>type of connectable conductor cross-sections</li> <li>for control circuit solid</li> <li>for control circuit finely stranded with core end processing</li> <li>for AWG cables for control circuit solid</li> <li>for AWG cables for control circuit finely stranded with core end processing</li> <li>wire length</li> <li>between soft starter and motor maximum</li> <li>at the digital inputs at DC maximum</li> <li>for main contacts with screw-type terminals</li> <li>for auxiliary and control contacts with screw-type terminals</li> <li>for auxiliary and control contacts with screw-type terminals</li> <li>0.8 1.2 N·m</li> </ul>	width of connection bar maximum	55 mm
<ul> <li>with conductor cross-section = 0.5 mm² maximum</li> <li>with conductor cross-section = 1.5 mm² maximum</li> <li>with conductor cross-section = 2.5 mm² maximum</li> <li>type of connectable conductor cross-sections</li> <li>for DIN cable lug for main contacts stranded</li> <li>for DIN cable lug for main contacts finely stranded</li> <li>2x (50 240 mm²)</li> <li>type of connectable conductor cross-sections</li> <li>for control circuit solid</li> <li>for control circuit finely stranded with core end processing</li> <li>for AWG cables for control circuit solid</li> <li>for AWG cables for control circuit finely stranded with core end processing</li> <li>wire length</li> <li>between soft starter and motor maximum</li> <li>at the digital inputs at DC maximum</li> <li>for main contacts with screw-type terminals</li> <li>for auxiliary and control contacts with screw-type terminals</li> <li>for auxiliary and control contacts with screw-type terminals</li> <li>0.8 1.2 N·m</li> </ul>	wire length for thermistor connection	
with conductor cross-section = 2.5 mm² maximum  type of connectable conductor cross-sections     of ro DIN cable lug for main contacts stranded     of ro DIN cable lug for main contacts finely stranded     va (70 240 mm²)  type of connectable conductor cross-sections     of ro control circuit solid     of ro control circuit finely stranded with core end processing     of ro AWG cables for control circuit solid     of ro AWG cables for control circuit finely stranded with core end processing  wire length     obetween soft starter and motor maximum     oat the digital inputs at DC maximum  tightening torque     of ro main contacts with screw-type terminals     of ro auxiliary and control contacts with screw-type terminals  2x (50 240 mm²)  2x (70 240 mm²)  2x (0.25 1.5 mm²)  2x (0.25 1.5 mm²)  2x (24 16)	_	50 m
with conductor cross-section = 2.5 mm² maximum  type of connectable conductor cross-sections     of ro DIN cable lug for main contacts stranded     of ro DIN cable lug for main contacts finely stranded     va (70 240 mm²)  type of connectable conductor cross-sections     of ro control circuit solid     of ro control circuit finely stranded with core end processing     of ro AWG cables for control circuit solid     of ro AWG cables for control circuit finely stranded with core end processing  wire length     obetween soft starter and motor maximum     oat the digital inputs at DC maximum  tightening torque     of ro main contacts with screw-type terminals     of ro auxiliary and control contacts with screw-type terminals  2x (50 240 mm²)  2x (70 240 mm²)  2x (0.25 1.5 mm²)  2x (0.25 1.5 mm²)  2x (24 16)	• with conductor cross-section = 1.5 mm² maximum	150 m
type of connectable conductor cross-sections  • for DIN cable lug for main contacts stranded • for DIN cable lug for main contacts finely stranded 2x (70 240 mm²)  type of connectable conductor cross-sections • for control circuit solid • for control circuit finely stranded with core end processing • for control circuit finely stranded with core end processing • for AWG cables for control circuit solid • for AWG cables for control circuit finely stranded with core end processing  wire length • between soft starter and motor maximum • at the digital inputs at DC maximum • at the digital inputs at DC maximum  tightening torque • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals		250 m
• for DIN cable lug for main contacts stranded     • for DIN cable lug for main contacts finely stranded  type of connectable conductor cross-sections      • for control circuit solid     • for control circuit finely stranded with core end processing     • for AWG cables for control circuit solid     • for AWG cables for control circuit finely stranded with core end processing  vire length     • between soft starter and motor maximum     • at the digital inputs at DC maximum  tightening torque     • for auxiliary and control contacts with screw-type terminals  **Total mm²**  2x (50 240 mm²**)  2x (0.25 1.5 mm²**)  2x (0.25 1.5 mm²**)  2x (24 16)		
• for DIN cable lug for main contacts finely stranded  type of connectable conductor cross-sections      • for control circuit solid     • for control circuit finely stranded with core end processing     • for AWG cables for control circuit solid     • for AWG cables for control circuit finely stranded with core end processing  wire length     • between soft starter and motor maximum     • at the digital inputs at DC maximum  tightening torque     • for main contacts with screw-type terminals     • for auxiliary and control contacts with screw-type terminals  2x (24 16)		2x (50 240 mm²)
type of connectable conductor cross-sections  • for control circuit solid • for control circuit finely stranded with core end processing • for AWG cables for control circuit solid • for AWG cables for control circuit finely stranded with core end processing • for AWG cables for control circuit finely stranded with core end processing  wire length • between soft starter and motor maximum • at the digital inputs at DC maximum  • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals  • one control circuit finely stranded with core end processing  2x (24 16)	<u> </u>	
• for control circuit solid     • for control circuit finely stranded with core end processing     • for AWG cables for control circuit solid     • for AWG cables for control circuit finely stranded with core end processing      • for AWG cables for control circuit finely stranded with core end processing   wire length     • between soft starter and motor maximum     • at the digital inputs at DC maximum      • for main contacts with screw-type terminals     • for auxiliary and control contacts with screw-type terminals      • for scausiliary and control contacts with screw-type terminals      • for scausiliary and control contacts with screw-type      • for with contacts with screw-type      • for auxiliary and control contacts with screw-type      • for auxiliary and control contacts with screw-type      • for with screw-type      • for auxiliary and control contacts		
• for control circuit finely stranded with core end processing     • for AWG cables for control circuit solid     • for AWG cables for control circuit finely stranded with core end processing  wire length     • between soft starter and motor maximum     • at the digital inputs at DC maximum  tightening torque     • for main contacts with screw-type terminals      • for auxiliary and control contacts with screw-type terminals  • for auxiliary and control contacts with screw-type terminals  • for which core end processing  2x (0.25 1.5 mm²)  2x (24 16)		2x (0.25 1.5 mm²)
• for AWG cables for control circuit solid     • for AWG cables for control circuit finely stranded with core end processing  wire length     • between soft starter and motor maximum     • at the digital inputs at DC maximum  tightening torque     • for main contacts with screw-type terminals  for auxiliary and control contacts with screw-type terminals  2x (24 16)  2x (24 16)  2v (24 16)		
• for AWG cables for control circuit finely stranded with core end processing  wire length     • between soft starter and motor maximum     • at the digital inputs at DC maximum  tightening torque     • for main contacts with screw-type terminals     • for auxiliary and control contacts with screw-type terminals  2x (24 16)  2x (24 16)  800 m  1 000 m		
core end processing  wire length  • between soft starter and motor maximum  • at the digital inputs at DC maximum  tightening torque  • for main contacts with screw-type terminals  • for auxiliary and control contacts with screw-type terminals  • for auxiliary and control contacts with screw-type terminals		
between soft starter and motor maximum     at the digital inputs at DC maximum      tightening torque     for main contacts with screw-type terminals     for auxiliary and control contacts with screw-type terminals      0.8 1.2 N·m	•	۵۸ (۵۶ ۱۷)
<ul> <li>at the digital inputs at DC maximum</li> <li>tightening torque</li> <li>for main contacts with screw-type terminals</li> <li>for auxiliary and control contacts with screw-type terminals</li> <li>0.8 1.2 N·m</li> </ul>	wire length	
tightening torque  • for main contacts with screw-type terminals  • for auxiliary and control contacts with screw-type terminals  20 35 N·m  0.8 1.2 N·m	<ul> <li>between soft starter and motor maximum</li> </ul>	800 m
<ul> <li>for main contacts with screw-type terminals</li> <li>for auxiliary and control contacts with screw-type terminals</li> <li>20 35 N⋅m</li> <li>0.8 1.2 N⋅m</li> </ul>	<ul> <li>at the digital inputs at DC maximum</li> </ul>	1 000 m
<ul> <li>for main contacts with screw-type terminals</li> <li>for auxiliary and control contacts with screw-type terminals</li> <li>20 35 N⋅m</li> <li>0.8 1.2 N⋅m</li> </ul>	tightening torque	
• for auxiliary and control contacts with screw-type terminals 0.8 1.2 N·m		20 35 N·m
terminals	**	0.8 1.2 N·m
tightening torque [lbf·in]		
	tightening torque [lbf·in]	

• for main contacts with corou typo terminals	177 310 lbf·in
for main contacts with screw-type terminals     for auxiliary and control contacts with screw-type	1/7 310 lbf-in 7 10.3 lbf-in
<ul> <li>for auxiliary and control contacts with screw-type terminals</li> </ul>	7 10.9 IDT III
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m; Derating as of 1000 m, see catalog
ambient temperature	
during operation	-25 +60 °C; Please observe derating at temperatures of 40 °C or above
during storage and transport	-40 +80 °C
environmental category	
<ul> <li>during operation according to IEC 60721</li> </ul>	3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6
during storage according to IEC 60721	1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4
during transport according to IEC 60721	2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)
EMC emitted interference	acc. to IEC 60947-4-2: Class A
Communication/ Protocol	
communication module is supported	
PROFINET standard	Yes
<ul> <li>PROFINET high-feature</li> </ul>	Yes
• EtherNet/IP	Yes
Modbus RTU	Yes
Modbus TCP	Yes
• PROFIBUS	Yes
UL/CSA ratings	
manufacturer's article number	
<ul> <li>of the fuse</li> <li>usable for Standard Faults up to 575/600 V</li> </ul>	Type: Class J / L, max. 3000 A; Iq = 85 kA
according to UL  — usable for High Faults up to 575/600 V according to	Type: Class J / L, max. 3000 A; Iq = 100 kA
UL  — usable for Standard Faults at inside-delta circuit up	Type: Class J / L, max. 3000 A; Iq = 85 kA
to 575/600 V according to UL  — usable for High Faults at inside-delta circuit up to	Type: Class J / L, max. 3000 A; Iq = 100 kA
575/600 V according to UL	
operating power [hp] for 3-phase motors  • at 200/208 V at 50 °C rated value	250 hp
• at 220/230 V at 50 °C rated value	350 hp
	400 hp
• at 460/480 V at 50 °C rated value	850 hp
• at 575/600 V at 50 °C rated value	1 100 hp
at 200/208 V at inside-delta circuit at 50 °C rated value	600 hp
at 220/230 V at inside-delta circuit at 50 °C rated value	700 hp
• at 460/480 V at inside-delta circuit at 50 °C rated value	1 500 hp
at 575/600 V at inside-delta circuit at 50 °C rated value	1 900 hp
contact rating of auxiliary contacts according to UL	R300-B300
Safety related data	
protection class IP on the front according to IEC 60529	IP00
electromagnetic compatibility	acc. to IEC 60947-4-2
ATEX	
certificate of suitability	
• ATEX	Yes
• IECEx	Yes
according to ATEX directive 2014/34/EU	BVS 18 ATEX F 003 X
type of protection according to ATEX directive 2014/34/EU	II (2)G [Ex eb Gb] [Ex db Gb] [Ex pxb Gb], II (2)D [Ex tb Db] [Ex pxb Db], I (M2) [Ex db Mb]
hardware fault tolerance according to IEC 61508 relating to ATEX	0
PFDavg with low demand rate according to IEC 61508 relating to ATEX	0.008
PFHD with high demand rate according to EN 62061 relating to ATEX	5E-7 1/h
Safety Integrity Level (SIL) according to IEC 61508 relating to ATEX	SIL1
T1 value for proof test interval or service life according to IEC 61508 relating to ATEX	3 a

### Certificates/ approvals

#### **General Product Approval**







Confirmation







For use in hazardous locations

**Declaration of Conformity** 

**Test Certificates** 

Marine / Shipping







Type Test Certificates/Test Report





Marine / Shipping

other





Confirmation

#### **Further information**

Siemens has decided to exit the Russian market (see here).

https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

Information- and Downloadcenter (Catalogs, Brochures,...)

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RW5556-2HA16

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RW5556-2HA16

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

https://support.industry.siemens.com/cs/ww/en/ps/3RW5556-2HA16

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RW5556-2HA16&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current

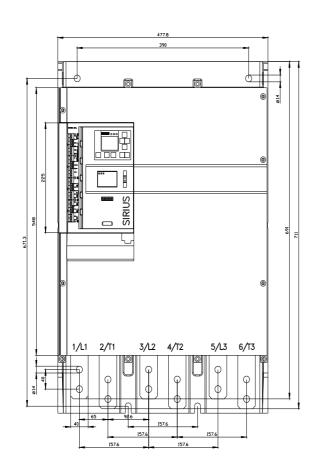
https://support.industry.siemens.com/cs/ww/en/ps/3RW5556-2HA16/char

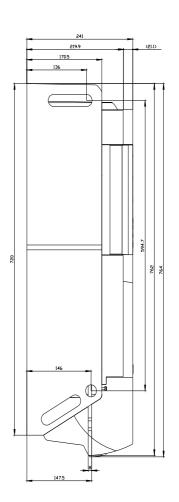
Characteristic: Installation altitude

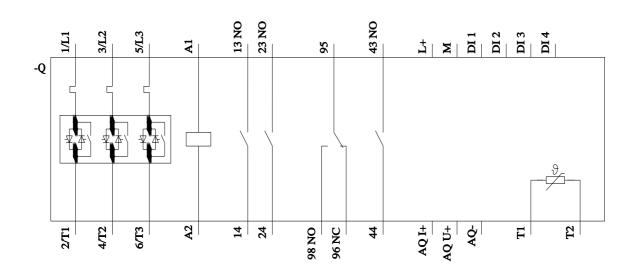
 $\underline{\text{http://www.automation.siemens.com/bilddb/index.aspx?view=Search\&mlfb=3RW5556-2HA16\&objecttype=14\&gridview=view1}$ 

Simulation Tool for Soft Starters (STS)

https://support.industry.siemens.com/cs/ww/en/view/101494917









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